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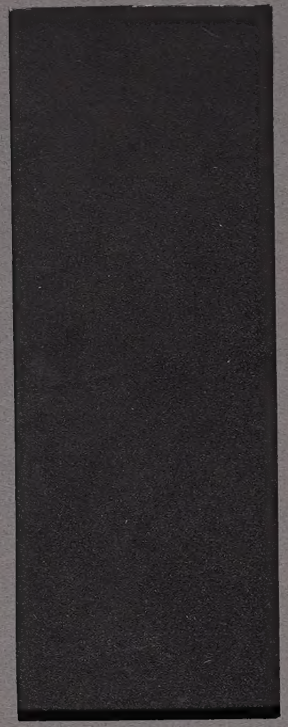

GenRad

GENEVA PC
Configuration Manual

9007–3013–00

Printed in U.S.A.
October, 1998

Symbol ⚠ IEC417 on equipment signifies that the manual contains information to prevent injury or equipment damage. Refer to page vi and to other manuals in set.

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To help us achieve our goal, we ask that you:

- Please fill out and return the Reader Comments card, located at the back of this manual, if you have any suggestions for structure or content improvements.
- Please document any product problems or enhancement requests on the GenRad System Performance Report forms, supplied with the equipment documentation, and return them to the GenRad Customer Care Center (CCC). The contact addresses are in the Preface of this manual.

Thank you for choosing GenRad as your integrated diagnostic solutions provider.

WARNINGS

- Do not remove covers. Potentially lethal voltages are present inside the system. Observe all WARNING markings on the equipment and WARNING notices in the manual. If servicing is necessary, it should be performed only by a qualified person familiar with the electrical shock hazards present inside the system.
- Grounding circuit continuity is vital for safe operation of the equipment. Never operate equipment with grounding conductor disconnected.
- Safeguard your hands and fingers while handling any fixture or other accessory. Be sure it is securely supported if you reach under it. If it is heavy, you must have another person help to move it.
- The symbol on equipment signifies that the manual contains information to prevent injury or equipment damage. Observe and heed all WARNING notices in the manuals and the equipment. WARNINGS call attention to personnel safety information.
- Replace any fuse only with the same type and ratings as labeled on the equipment and/or listed in the manual.

MISES EN GARDE

- Ne pas enlever les couvercles. Les niveaux de tension se trouvant dans le système sont extrêmement dangereux. Respectez toutes les consignes de sécurité figurant sur l'équipement et les MISES EN GARDE données dan ce manuel. Seule une personne qualifée, connaisant les risques de décharge électrique du système, est autorisée à effecteur les opérations de nettoyage ou de réparation du système.
- Le circuit doit être mis à la terre sans discontinuation pour garantir un fonctionnement sans danger de l'équipement. Ne jamais faire fonctionner l'équipement pendant que le raccord à la terre est déconnecté.
- Protégez–vous les mains et les doigts pendant le maniement de tout dispositif de serrage ou autre accessoire. Assurez–vous que ceux–ci soient bien solidement fixés en place, avant de vous pencher sous eux. Si l'accessoire en question est trop lourd, faites–vous aider pour le déplacer.
- Le symbole figurant sur l'équipement signifie que le manuel contient des informations permettant d'empêcher les accidents ou l'endommagement de l'équipement. Respectez toutes les consignes de MISES EN GARDE données dans le manuel et figurant sur l'équipement. Les MISES EN GARDE attirent l'attention sur la nécessité de se protéger.
- Ne remplacez les fusibles qu'avec des fusibles du même type et de la même valuer que ceux mentionnés sur l'équipement et figurant dans le manuel.

WARNHINWEISE

- Abdeckungen nicht entfernen. Potentiell lebensgefährliche Spannungsbedingungen innerhalb des Systems vorhanden. Alle auf der Einrichtung befindlichen WARNMARKIERUNGEN und im Handbuch enthaltenen WARNHINWEISE beachten. Wartungsarbeiten dem qualifizierten Personal überlassen, das mit den innerhalb des Systems vorhandenen Gefahren eines elektrischen Schlags vertraut ist.
- Die Erdung des Schaltungsdurchgangs ist eine Grundvoraussetzung für den sicheren Betrieb der Einrichtung. Einrichtung niemals ohne Erdleiter betreiben.
- Hände und Finger bei der Handhabung einer Spannvorrichtung oder eines anderen Zubehörteils schützen. Sich vor der Plazierung der Hände unterhalb der Einrichtung vergewissern, daß die Einrichtung über ausreichenden Halt verfügt. Falls die Einrichtung schwer ist, sich von einer anderen Person beim Tragen helfen lassen.
- Das auf der Einrichtung befindliche Symbol bedeutet, daß das Handbuch Informationen zur Verhinderung von Körperverletzungen oder Sachschäden enthält. Alle in den Handbüchern enthaltenen und auf der Einrichtung befindlichen WARNHINWEISE beachten und befolgen. WARNHINWEISE sollen auf Informationen zur persönlichen Sicherheit aufmerksam machen.
- Sicherungen nur durch Sicherungen des gleichen Typs und der gleichen Nennleistung ersetzen. Auf der Einrichtung befindliche Etiketten und im Handbuch enthaltene Informationen zu Rate ziehen.

AVISOS

- Não remova as tampas. Há voltagens potencialmente fatais presentes na parte interna do sistema. Observe todas as marcações de AVISOS no equipamento e discrições de AVISOS no manual. Se for necessário fazer manutenção, esta deve ser feita somente por uma pessoa qualificada familiarizada com os perigos de choques elétricos presentes na parte interna do sistema.

- A continuidade do circuito de aterramento é vital para a operação segura do equipamento. Nunca opere o equipamento com o cabo de aterramento desligado.

- Proteja as suas mãos e dedos ao operar qualquer dispositivo ou outro acessório. Certifique–se que ele esteja suportado com segurança se você tiver que alcançar algo debaixo dele. Se for pesado, você deve ter a ajuda de uma outra pessoa para movê–lo.

- O simbolo IEC417 no equipamento significa que o manual contém informações para prevenir ferimentos ou danos ao equipamento. Observe e preste atenção a todos os AVISOS nos manuais e no equipamento. Os AVISOS chamam a atenção a informações sobre a segurança pessoal.

- Substitua qualquer fusivel somente com um do mesmo tipo e da mesma capacidade nominal como marcado no equipamento e listado no manual.

ADVERTENCIAS

- No quitar las tapas. En el interno del sistema hay voltajes potencialmente mortales. Obsérvense todos los rótulos de ADVERTENCIA presentes en el equipo, así como la descripción de las notas de ADVERTENCIA presentadas en el manual. De ser necesario, el servicio de mantenimiento deberá ser efectuado únicamente por personal calificado que esté familiarizado con los peligros de choque eléctrico presentes en el sistema.

- La continuidad del circuito de puesta a tierra es de vital importancia para el functionamiento seguro del equipo. Nunca se debe usar el equipo con el conductor de puesta a tierra desconectado.

- Protéjanse las manos y los dedos toda vez que sea necesario manipular un dispositivo u accesorio. Cerciorarse de que el mismo esté firmemente sujetado antes de proceder a trabajar debajo de él. Si el aparato u accesorio fuera pesado, pedir la ayuda de otra persona para moverlo.

- El simbolo IEC417 que aparece en el equipo significa que el manual contiene informaciones para evitar lesiones personales o daños al equipo. Obsérvense y préstese atención a toda las notas de ADVERTENCIA presentes en los manuales y en el equipo. Las ADVERTENCIAS sirven para llamar la atención sobre informaciones de seguridad para el personal.

- Reemplazar los fusibles únicamente con otros del mismo tipo y capacidad, según lo indique el rótulo en el equipo y la descripción en el manual.

CAUTIONS

- Observe and heed all CAUTION notices in the manuals and on the equipment. CAUTIONS call attention to information about safeguarding *equipment* from damage.

HANDLING PRECAUTIONS FOR ELECTRONIC DEVICES SUBJECT TO DAMAGE BY STATIC ELECTRICITY

Place instrument or module to be serviced, spare parts in conductive (anti–static) envelopes or carriers, hand tools etc. on a work surface defined as follows. The work surface must be conductive and reliably connected to earth ground through a safety resistance of approximately 250 kilohms. The surface must **NOT** be metal. (A resistivity of 30 to 300 kilohms per square inch is suggested.) Avoid placing tools or electrical parts on insulators.

Ground the frame of any line–powered equipment, test instruments, lamps, soldering irons, etc., directly to earth ground. To avoid shorting out the safety resistance, be sure that grounded equipment has rubber feet or other means of insulation from the work surface. The module being serviced should be insulated while grounded through the power–cord ground wire, but must be connected to the work surface before, during and after any disassembly or other procedure in which the line cord is disconnected.

Exclude any hand tools (such as non–conductive plunger–type solder suckers) that can generate a static charge.

Ground yourself reliably, through a resistance, to the work surface; use, for example, a conductive strap or cable with a wrist cuff. The cuff must make electrical contact directly with your skin; do **NOT** wear it over clothing. (Resistance between skin contact and work surface through a commercially available personnel grounding device is typically 250 kilohms to 1 megohm.)

If any circuit or IC packages are to be stored or transported, enclose them in conductive envelopes or carriers. Remove them only with the above precautions; handle IC packages without touching the contact pins.

Avoid circumstances that are likely to produce static charges, such as wearing clothes of synthetic material, sitting on a plastic–covered stool (particularly while wearing wool), combing your hair, or making extensive erasures. *These circumstances are most significant when the air is dry.*

When testing static sensitive devices, be sure dc power is on before, during, and after application of test signals. Be sure all pertinent voltages have been switched off while boards or components are removed or inserted.

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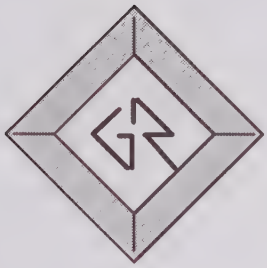

Overview

This manual provides information about the personal computer (PC) installed in your test system. It describes the PC, standard and optional peripherals, switch settings and configuration information.

Audience

This manual will benefit:

- Network Managers or Administrators
- System Managers or Administrators
- Test Engineers
- Field Service Personnel
- Site Managers

About this Manual

This section identifies the knowledge or tasks described in the chapters and appendices of this manual.

For information about	Read this Chapter or Appendix
an overview of the PC and related peripherals	System Functional Description
hardware switch settings for the backplane, modem, RS–232 board, etc.	PC Settings
software configuration and CMOS and BIOS settings	Configuration Information
creating and using an Emergency Repair Disk	Emergency Repair Disk
ordering information for PC Field Replaceable Units	Field Replaceable Units

Related GenRad Documentation

This section lists other GenRad manuals that may provide supporting or related information.

Manual Title	How it relates or supports this manual
The installation instructions for your version of ENCOMPASS.	Provides information on loading and configuring the operating system.

Non–GenRad Documentation

This section lists non–GenRad manuals that may provide useful information.

Manual Title	How it relates or supports this manual
PCI-P2FV Intel Pentium II Single Board Computer User's Manual	Describes features, CMOS settings, and ATI video information.
OEM Information for DMCC Backplanes	Describes features, service, and settings of PC Backplane.
OEM Information for ETMXE CD/CR/CT Enclosure	Describes features, service, and settings of PC Chassis.
OEM Information for the ETMXE AD/BP Enclosure	Describes features, service, and settings of PC Chassis.
Prioris LX Server User's Guide	Describes features, settings, and troubleshooting Prioris PCs.
Tape Store Reference Manual	Describes the setup and operation of Tape Drive.
Etherlink XL PCI Network Interface Cards User's Guide	Describes the setup, operation, and diagnostics of the Network Card.
User's Guide, FlashPoint LT Host Adapter	Describes the settings and operation of the 13-Slot PC SCSI card.

Document Conventions

The following document conventions are used throughout the documentation set.

Convention	Indicates
`Bold monospace text`	command text that you enter
Bold text	commands, keys, buttons, prompts, menu options, icons, and literals within text
`Courier text`	command, syntax, or error message
`Italic monospace text`	replace the *`term`* with a valid entry
Italic text	manual title, chapter title, or section title
P/N or PN	part number
[*text, text*]	field within the brackets is optional
{text, text}	select one or more choices within the braces
CAUTION	potential harm to the system or equipment as a result of this action
Example	the beginning of an example
End Example	the end of an example
NOTE	specialized information that may benefit you
NEXT	informational options that direct you to the next chapter or step
WARNING	potential harm to you as a result of this action

Manual Reorder Information

To reorder this manual, contact the GenRad Parts Sales group.

Part Number	Part Number (w/ 3–ring Binder)	Contact
9007–3013–00	N/A	GenRad Parts Sales 7 Technology Park Drive Westford, MA 01886–0033 Phone: (978) 589-7000 1–800–4–GENRAD (USA Only) (1-800-443-6723) To connect to Parts Sales, select the number 1, then the number 3. Fax: (978)–589–2064

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Before contacting the Customer Care Center, please have the following information available:

- Your site number
- Hardware system type
- System serial number
- Software version number

You can contact the Customer Care Center by:

Phone	(978) 589-7332 1–800–4–GENRAD (USA Only) (1-800-443-6723) To connect to the Customer Care Center, select the number 1, then the number 2.
Fax	(978) 589-2080 (Customer Care Center) (978) 589-7007 (GenRad Main)
E–mail	cs1@genrad.com
Mail	GenRad, Inc. 7 Technology Park Drive, MS 6 Westford, MA 01886-0033
World Wide Web	http://www.genrad.com
FTP	`ftp.genrad.com` **login:** anonymous **password:** your e-mail address `cd pub/pub` (public, for directory use ls) or `cd pub/incoming` (public, directory cannot be seen)

System Functional Description

WARNING **To avoid personal injury, and to reduce the risk of electric shock, do not perform any servicing other than that which is specified in the operating instructions unless you are qualified to do so.**

The servicing instructions are for use by qualified personnel only. Such personnel includes electricians and GenRad or customer factory trained personnel. Maintenance procedures that do not involve the use of tools or access inside the equipment may be performed by an operator.

PC Overview

A high-performance PC is used as the system control center. GenRad-selected PC interface boards and related peripherals are carefully chosen to optimize performance. The PC Power Supply is switch selectable for 115V, 60Hz or 230V, 50Hz AC input.

This computer subsystem contains all the elements necessary for preparing test programs, saving them to disk, executing test programs, and controlling all other system functions. Depending on your test system, not all optional devices are available.

This is a list of the standard and optional devices and peripherals contained within or connected to the currently offered PC.

- Pentium II CPU
- 4GB SCSI Fixed Disk Drive
- Super VGA Controller, 1024 × 768, 256 colors (2MB graphics memory)
- 15-inch Flat Square or optional 17-inch SVGA Color Monitor
- $3^1/_2$-inch, 1.44-MB Floppy Drive
- 4GB SCSI Tape Drive
- 128MB of RAM Memory
- 4-port (or optional 8-port) RS-232 Serial Interface
- Two Built-In Serial Interface Ports
- IEEE (AT-GPIB) Interface
- Parallel (Line Printer) Port (bi-directional)
- AT-MXI Interface (Optional MXI-2)
- Optional 33.6K Baud Modem (for remote support)
- Ethernet Network Interface (10/100 BASE-T)
- Three-Button Mouse
- Operator Keypad
- Operator Footswitch
- Keyboard

The PC in your system may have either 7 slots or 13 slots. Refer to the figures and tables in this chapter and Chapter 2 for more detailed information.

The function of the indicators and switches on the front of a typical PC are:

Indicator or Switch	Function
Diskette Access Indicator	Lit when diskette drive is in use.
Diskette Eject Pushbutton	Releases diskette from the drive.
Reset Button	Resets the computer and causes the Power-On Self Test (POST) program (excluding the memory test) to run.
Fixed Disk Access Indicator	Lit when fixed disk drive is in use.
Power On Indicator	Lit when the power on/off switch is on.
Tape Drive Indicator	Lit when active.

Figure 1–1 shows the location of the controls, indicators, and drives on the front of a typical 7-Slot PC. Figure 1–2 shows the rear of a typical 7-Slot PC and indicates a general system configuration.

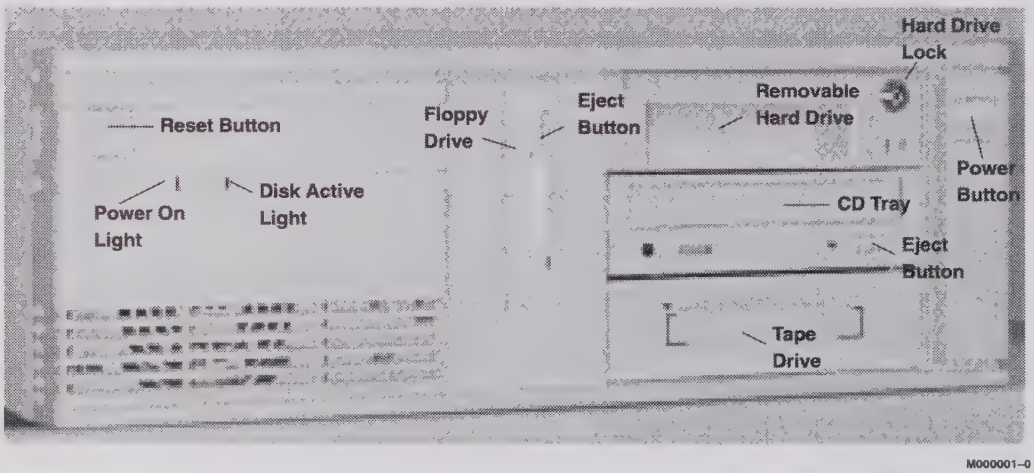


Figure 1–1 Typical 7-Slot PC, Front View

CAUTION **To prevent equipment damage, the 115/230 Voltage Select Switch at the rear of the PC must be set manually and correctly. Permanent damage could result if the switch setting does not match the system's input voltage.**

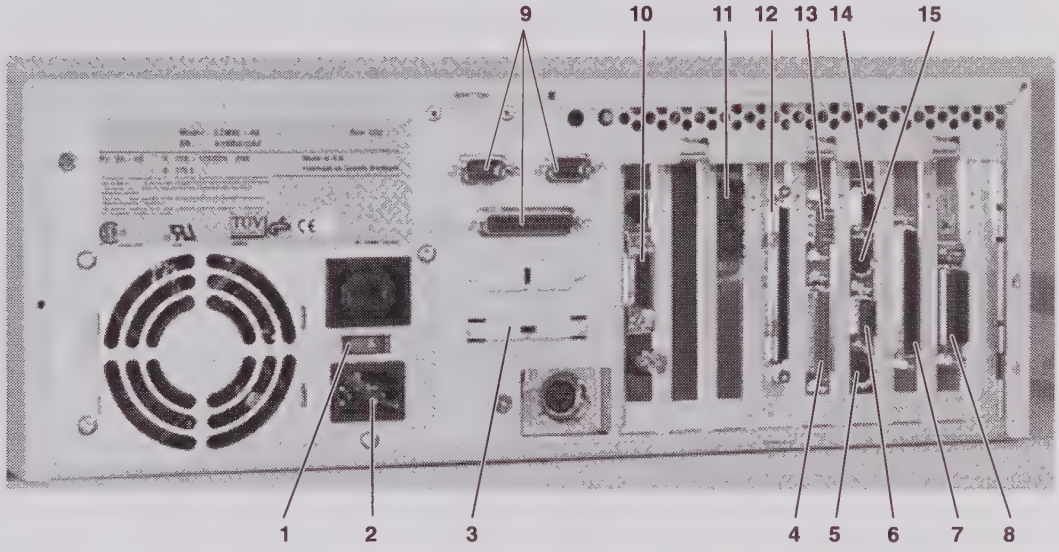


Figure 1–2 Typical 7-Slot PC, Rear View

1	Voltage Select Switch	9	Not Used
2	Power In	10	Network Card
3	External SCSI Connector	11	Modem (Optional)
4	Parallel Port	12	HOSTESS Card
5	PS/2 Keyboard	13	COM2
6	COM1	14	Monitor
7	MXI	15	PS/2 Mouse
8	GPIB		

Figure 1–3 shows the location of the controls, indicators, and drives on the front of a typical 13-Slot PC. Figure 1–4 shows the rear of a typical 13-Slot PC and indicates a general system configuration.

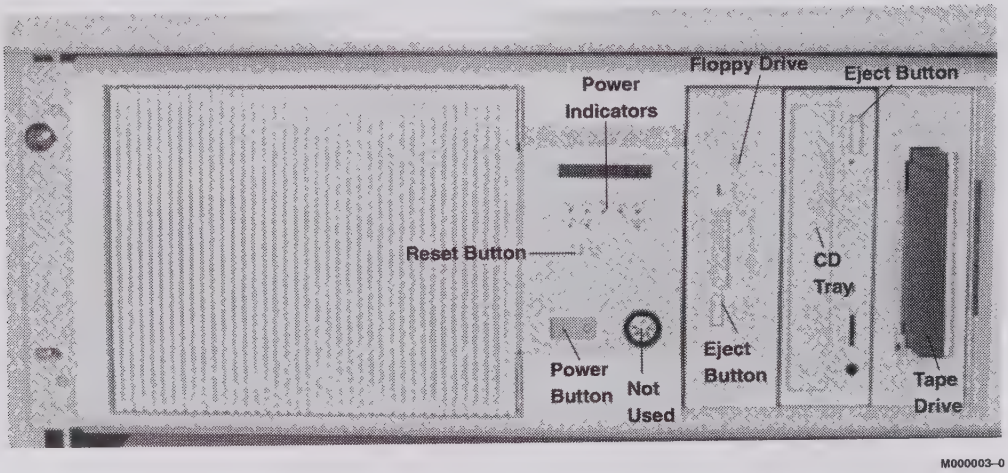


Figure 1–3 Typical 13-Slot PC, Front View

CAUTION **To prevent equipment damage, the 115/230 Voltage Select Switch at the rear of the PC must be set correctly. Permanent damage could result if the switch setting does not match the system's input voltage.**

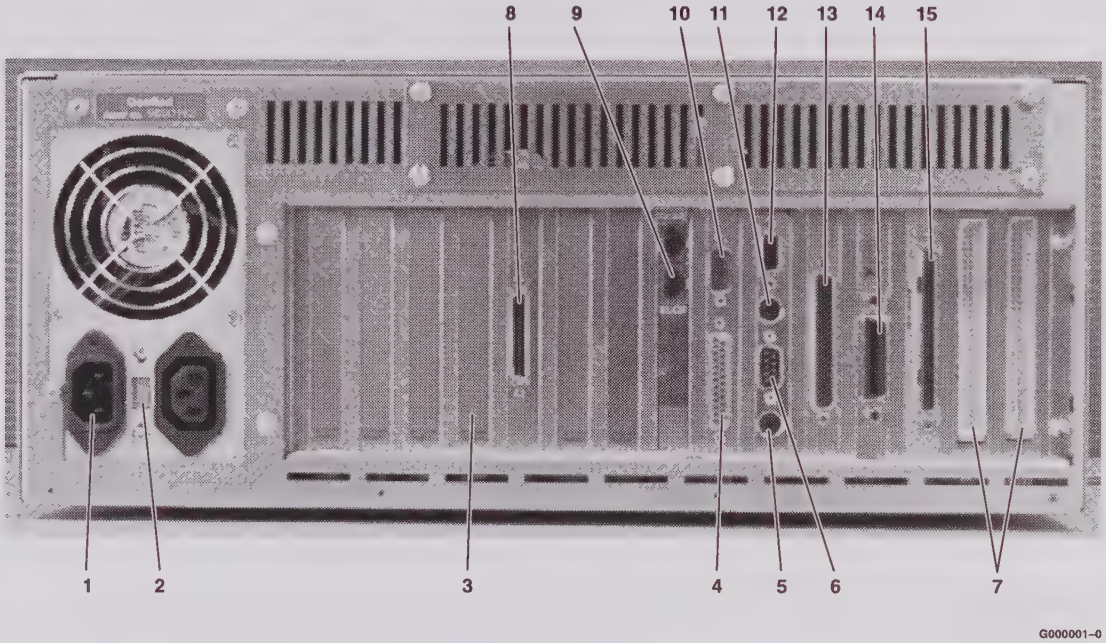


Figure 1–4 Typical 13-Slot PC, Rear View

1	Power In	9	Modem (Optional)
2	Voltage Select Switch	10	COM2
3	Reserved for Network Interface Card	11	PS/2 Mouse
4	Parallel Port	12	Monitor
5	PS/2 Keyboard	13	MXI
6	COM1	14	GPIB
7	IOP Handler Interface	15	HOSTESS Card
8	External SCSI Connector		

Power-On-Self-Test

The PC contains a Power-On-Self-Test (POST). The POST initializes and tests the PC each time power is applied, or whenever the PC boots. When the POST is running, a count displays as it sequences through the memory test procedure. During this test, a message is displayed indicating a key or key combination to press to enter CMOS setup. If you have not pressed the appropriate function key when this message is on the screen, and if there are no errors from POST, the PC displays a configuration screen and attempts to boot.

Tape Drive

The tape drive provided with the Pentium II PC is a SCSI-based Travan (TR-4) drive. It uses minicartridge tapes capable of storing up to 4GB of uncompressed information or 8GB of compressed information (60MB/min) per tape.*

The tape drive includes Seagate's Backup Exec Software for Windows NT, which is used to manage backup and restore options. Online documentation is provided with the Backup Exec Software, which explains the features and operation of the program. An "Easy Installation Sheet" provides introductory setup and use instructions.

* Seagate P/N 34000 or Sony Recording Media P/N DGD120MA

Keyboard

The keyboard enables the operator to enter commands or data into the system. Monitor cursor control and other display functions are performed from the keyboard. In addition to the standard keys of a typewriter, the keyboard has function keys for test program editing. The keyboard cable can be detached from the keyboard connector port on the rear of the PC during UUT testing. The keyboard should be plugged in before the PC is powered on. Connecting the keyboard after power up can cause the system to fail.

Printer

A parallel printer is generally used to print test program files. Appropriate printer supplies are available from computer-related paper suppliers.

Network Connection

The network connection supports high-speed data exchange. The Network Interface Card (NIC), located in the PC, provides external connection to a thinwire, thickwire, or twisted pair network. Purchase and install the related cables to the appropriate network port. The current board (3Com Ethernet 3c900) is capable of 10/100 BASE-T.

Modem

The PC may contain an optional internal modem, which can be used by GenRad to perform remote diagnostics. This modem is supplied with U.S. and Canadian systems only.

PC Settings

This chapter specifies the recommended DMA channel, interrupts, and I/O address assignments for GenRad PC-based products. This chapter also provides configuration data and guidelines for changing the following:

- Setup parameters for PCs including Single Board Computer and Backplane connections
- Comtrol HOSTESS card settings
- AT-MXI and PCI-MXI-2 Interface Board settings
- AT-GPIB/TNT Interface Board settings
- IOP 90 Handler Interface Board settings
- Modem Jumper settings
- Network Card setup
- Seagate 4GB Hard Disk Drive settings

WARNING **To avoid personal injury, and to reduce the risk of electric shock, do not perform any servicing other than that which is specified in the operating instructions unless you are qualified to do so.**

The servicing instructions are for use by qualified personnel only. Such personnel includes electricians and GenRad or customer factory trained personnel. Maintenance procedures that do not involve the use of tools or access inside the equipment may be performed by an operator.

Switch Setting Configurations

This document shows the proper configuration for all switch settings for system–related interface boards installed in the various PCs GenRad offers.

Pentium II PCs

Table 2–1
Pentium II 7-Slot Assignments

Slot Number and Type	Board
1–ISA	GenRad–supplied MXI
2–ISA	GenRad–supplied GPIB
3–ISA	Comtrol HOSTESS
4–ISA	GenRad–supplied Modem
1–PCI	Shared (Optional MXI-2)
3–PCI	Network Card
4–PCI	Not Used
CPU Slot	Single Board Computer

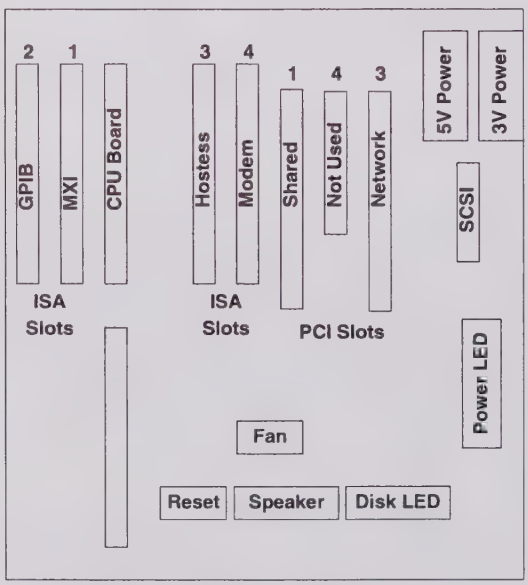


Figure 2–1 7-Slot Backplane Layout

Table 2–2
Pentium II 13-Slot Assignments

Slot Number and Type	Board
1–ISA	GenRad–supplied MXI
2–ISA	GenRad–supplied GPIB
3–ISA	GenRad–supplied Modem (Optional)
4–ISA	Not used
5–ISA	IOP 90
6–ISA	Comtrol HOSTESS
1–PCI	Not used (Optional MXI-2)
2–PCI	SCSI Controller
3–PCI	Network Card
4–PCI	Not used
5–PCI	Not used
6–PCI	Not used
7–PCI	Not used
CPU Slot	Single Board Computer

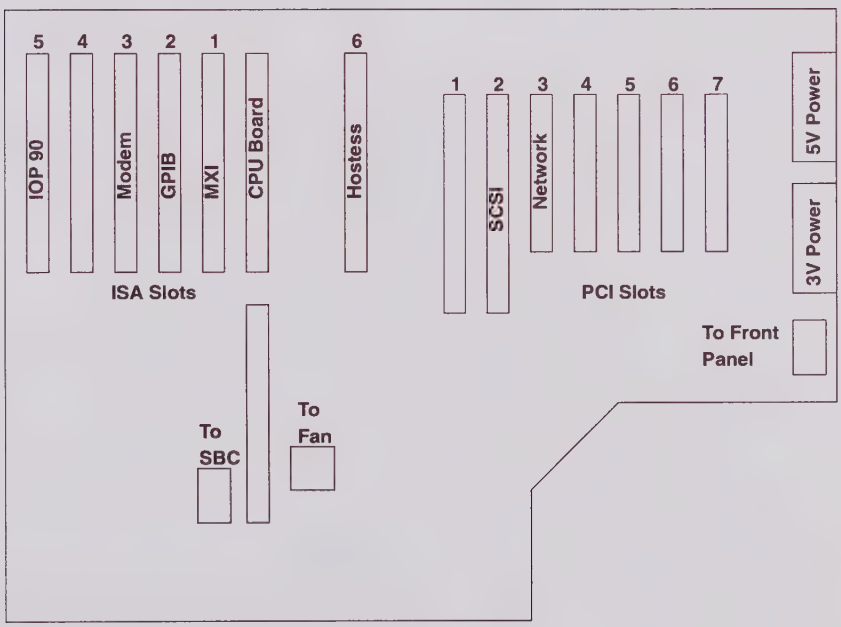


Figure 2–2 13-Slot Backplane Layout

Pentium II Single Board Computer (SBC) Settings

Table 2–3
Cable Connections and Jumper Settings for the SBC

Cable/Pin Pair Number	Function	Setting
Reset Cable	Resets the computer	Black and Green cable. Plug into connector labeled RESET, black wire closest to SIMMs.
COM2 Cable	Serial port connector	Plug into connector labeled COM2. Pin 1 oriented UP.
Floppy Drive Ribbon Connector	Floppy drive connector	Plug into connector labeled FLOPPY. Pin 1 (red strip) toward SIMMs.
Parallel Port Connector	Printer connector	Plug in below FLOPPY. Pin 1 (red strip) toward SIMMs.
J1–J4	Ratio	J1 – No Jumper J2 – Jumpered J3 – No Jumper J4 – Jumpered
J5–J6	MHz	J5 – Last two pins Jumpered J6 – First two pins Jumpered
J8	Enable Onboard I/O	First two pins Jumpered
J9	WatchDog timer sends reset	Last two pins Jumpered
J10	PS/2 mouse enabled	First two pins Jumpered
J11, J12	10 second WatchDog timer	Jumpered
J13	Block I/O	No Jumper
J14	Disable IRQ for VGA	No Jumper
J15	CMOS clear	No Jumper

Backplane Connections

Table 2–4
Cable Connections for the 7-Slot Backplane

Cables	Identification and Orientation
Fan	Red, yellow, and black cable. Plug into Fan Connector #2. Red wire to +12 pin.
Speaker	Red and black cable to J1002. Red wire to Pin 1, which is indicated by ▲.
Disk Active Light	White and yellow cable. Plug into J21. White wire to Pin 1, which is indicated by ▲.
Power LED	Blue and green cable. Plug into J35. Green wire to Pin 1, which is indicated by ▲.
Main Power Connection (3V)	Black and green cable. Plug into J12. Green wire oriented toward center.
Main Power Connection (5V)	Multi–color cable. Plug into J25. Black wire oriented toward center.
SCSI	"SCSI Connector" cable. Plug into J1020. Pin 1 oriented toward back of the computer.

Required Assignments

NOTE The following information is used for configuring DEC PCs only. If you are using a PC of any other type, retain this information for reference only.

The interrupts and I/O address assignments required by GenRad-supplied interfaces are:

- Interrupts (486)

IRQ10	HOSTESS Serial Card
IRQ11	AT-MXI/MXI-2
IRQ12	PC Mouse
IRQ15	AT-GPIB

- Interrupts (Pentium and Pentium II)

IRQ5	Ethernet
IRQ9	AT-MXI/MXI-2
IRQ10	HOSTESS Serial Card
IRQ11	SCSI Prioris (IOP 90 board – GR AccelerATE)
IRQ14	SCSI Pentium II
IRQ15	AT-GPIB/TNT

- I/O Base Addresses (Pentium and Pentium II)

280 H	HOSTESS Serial Card
2C0 H	AT-GPIB/TNT
300 H	Ethernet
320H	IOP 90 Board 1 (GR AccelerATE only)
324H	IOP 90 Board 2 (GR AccelerATE only)
340 H	AT-MXI

- Memory Addresses (usage)

C800H - CFFFH	Ethernet
D000H - DFFFH	AT-MXI
D000H - D800H	MXI-2

Clearing Interrupts

Normally, the Pentium II PC automatically assigns interrupts, or IRQs, to some expansion cards. Occasionally, IRQ conflicts occur. After booting the PC, the Configuration screen may show the same IRQ assigned to two devices, for example, 11, 11 or 14, 14. Alternatively, the designation NA displays in place of an IRQ even though an IRQ is available.

If this occurs, you can toggle a CMOS setting to clear PnP settings and allow true PnP assignment of IRQs. Enabling this setting informs the PC not to reserve any IRQs and to make them available for use.

Use the following procedure if PnP is not working as expected.

➤ To clear interrupts

1. Boot (or reboot) the PC.
2. While the opening screen is displayed, press the Delete key to enter CMOS setup.
3. Use the arrow keys to highlight PNP/PCI CONFIGURATION SETUP.
4. Press the Enter key.
5. Use the arrow keys to highlight Reset Configuration Data: Disabled.
6. Use the Page Up key to change **Disabled** to **Enabled**.
7. Press the Esc key.
8. Use the arrow keys to highlight SAVE & EXIT SETUP.
9. Press the Enter key.
10. Press the Y key and press the Enter key to save the settings and exit.

NOTE Upon reentering CMOS Setup, the Reset Configuration Data setting will be set to **Disabled**. This is normal operation and you do not need to reset it to **Enabled**. All PnP settings were cleared the first time it was changed.

Comtrol HOSTESS RS-232 Serial Interface

The Comtrol HOSTESS serial interface card supports up to eight RS-232 serial port connections for attaching external serial interface devices and options to the system.

Table 2–5
Comtrol HOSTESS 550 Interface (4/8 Port RS–232) Jumper/Switch Settings

SW1	Position	SW2	Position
SW1–1	ON for 4–port controller OFF for 8–port controller	SW2–1	OFF
SW1–2	ON	SW2–2	OFF
SW1–3	OFF	SW2–3	OFF
SW1–4	ON	SW2–4	OFF
SW1–5	OFF	SW2–5	OFF
SW1–6	ON	SW2–6	ON
SW1–7	ON	SW2–7	OFF
SW1–8	ON	SW2–8	ON for 4–port controller OFF for 8–port controller

JP1	Jumper to bottom 2 pins for 4–port controller. Jumper to top 2 pins for 8–port controller.
JP2	Jumpered
Interrupt	Set to 10
I/O Address	Set to 280

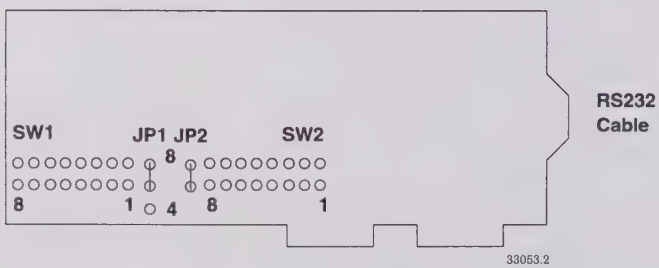


Figure 2–3 Comtrol HOSTESS 550 Interface (4/8 Port RS–232) Jumper/Switch Locations

RS-232 Port Configuration

The GENEVA power monitor and keypad/footswitch connect to extended communications ports resident on the Comtrol HOSTESS RS-232 board. The Comtrol RS-232 interface is available in four and eight serial port configurations, as shown in Table 2–6 and Table 2–9.

Table 2–6
Typical 4 Port Setup

Device/Option	Extended Ports	Com Port #
Power Monitor	1	COM5
Keypad	2	COM6
Customer Usable	3	COM7
Customer Usable	4	COM8

The power monitor and keypad data communications are factory set to: 9600 baud, 1 stop bit, 8 data bits, and no parity. The COM1 and COM2 ports (not shown above) are available for remote modems and other user options.

GENEVA GR AccelerATE Test Systems

GR4000A test systems support the HOSTESS 8 port RS-232 serial card. The tables below provide COM port configuration data for the GR4000A Automation test systems. Refer to Figure 2–4 for PC designations.

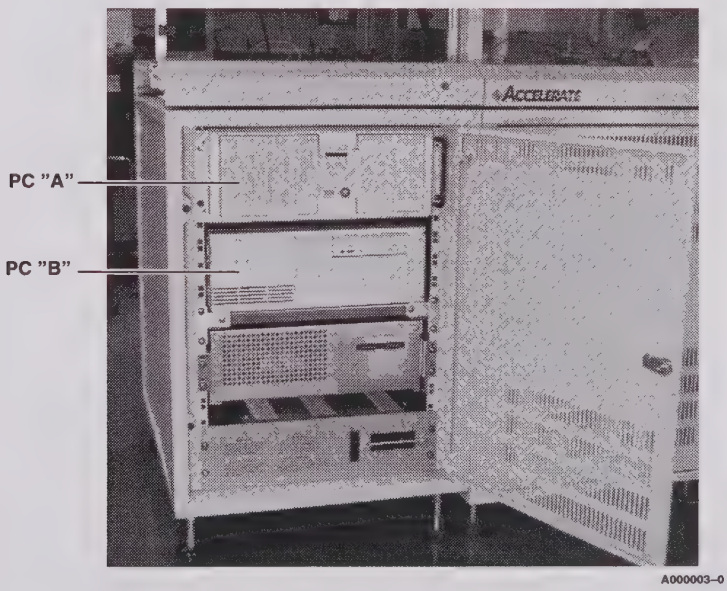


Figure 2–4 Typical GR4000A

Table 2–7 and Table 2–8 list the COM port configuration for a GR4000A Automation test system running ENCOMPASS 1.3.1.

Table 2–7
COM Port Configuration for PC "A"

Function	Distribution Box Connection	COM Port
Modem	n/a	COM1
User Defined	n/a	COM2
User Defined	1	COM3
User Defined	2	COM4
User Defined	3	COM5
Connection to PC "B"	4	COM6
User Defined	5	COM7
User Defined	6	COM8
User Defined	7	COM9
User Defined	8	COM10

Table 2–8
COM Port Configuration for PC "B"

Function	COM Port
Bar Code Reader	COM1
TES Software Communication with ENCOMPASS Software	COM2 (to COM6 of PC "A")

Table 2–9 lists the COM port configuration for a GR4000A Automation test system running ENCOMPASS 2.X.

NOTE A GR4000A Automation test system running ENCOMPASS 2.X includes a single PC.

Table 2–9
Typical 8 Port Setup

Device/Option	Extended Ports	Com Port #
Customer	1	COM3
Customer	2	COM4
Power Monitor	3	COM5
ENCOMPASS Software†	4	COM6
TES Software†	5	COM7
Customer	6	COM8
Customer	7	COM9
Customer	8	COM10

† for GR AccelerATE system

AT-MXI Interface

The AT-MXI interface is the High Speed interface bus from the PC (ISA-Bus) to the VXI/VME bus on the Slot 0 VXI/MXI Controller.

Table 2–10
AT-MXI Interface Settings

Switch/Channel/Interrupt	Setting
I/O Base Address	340H
SW1-1	ON
SW1-2	OFF
SW1-3	ON
SW1-4	OFF
SW1-5	OFF
Master DMA Channel	None
AT-MXI Board Interrupt Level	IRQ9
Slave DMA Channel	None
Slave Interrupt Level	None

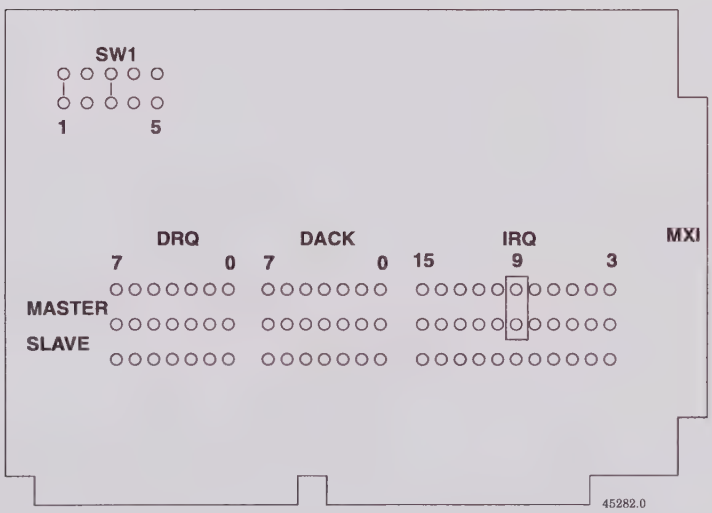


Figure 2–5 AT–MXI Interface Jumper and Switch Locations

PCI-MXI-2 Interface

The PCI-MXI-2 interface is the High Speed interface bus from the PC (PCI-Bus) to the VXI/VME bus on the Slot 0 VXI Controller.

Switch 1 (FOV) of the four-position switch at location U17 controls the operation of the EEPROM. Switch 1 determines whether the PCI-MXI-2 boots off the factory-configured half or the user-configurable half. In its default setting, the PCI-MXI-2 boots off the user-configurable half. This switch is useful in the event that the configuration becomes corrupted in such a way that the PCI-MXI-2 boots to an unusable state.

The TST switch (switch 2 of U17) controls the default factory configuration settings by permitting writes to the factory settings section of the EEPROM. This switch serves as a safety measure and should not be needed under normal circumstances. When this switch is off (its default setting) the factory configuration of the EEPROM is protected so any writes to the factory area will be ignored. The factory area is protected regardless of the setting of switch 1 of U17.

Table 2–11
PCI-MXI-2 Interface Switch Settings

Switch Settings	Setting
SW1 FOV	On
SW2 TST	Off
SW3 POS	Off
SW4 CT	On

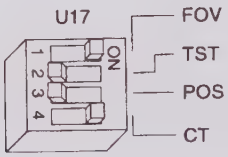


Figure 2–6 Factory Configuration Setting for PCI-MXI-2 Interface

AT-GPIB/TNT Interface (IEEE 488)

The AT-GPIB/TNT card is used to provide an IEEE 488 interface for the GENEVA PC architecture. In the GENEVA implementation, the AT-GPIB/TNT card is used to interface the PC to the Alliance power supply. The card also allows the user to connect other IEEE compatible devices. The TNT version is required for Windows NT operation.

Table 2–12
AT-GPIB/INT Interface (IEEE 488) Settings

Switch/Channel/Interrupt	Setting
I/O Base Address	2C0H
SW1-1	OFF
SW1-2	ON
SW1-3	OFF
SW1-4	OFF
SW1-5	ON
DMA Channel	None
AT-GPIB/TNT Board Interrupt Level	IRQ15
W3	Jumpered

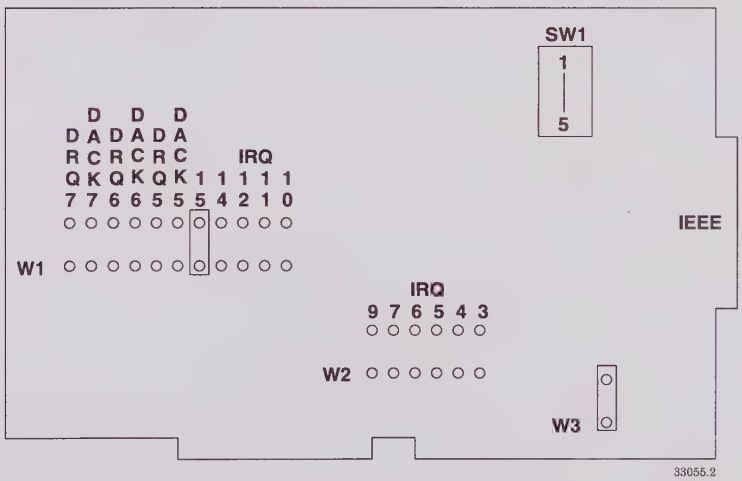


Figure 2–7 AT–GPIB/TNT Interface (IEEE 488) Jumper/Switch Locations

IOP 90 Handler Interface (GR AccelerATE System Only)

The IOP Handler Interface board controls the handler functions in a GR AccelerATE test system. It is supported only in the 13-slot PC. The I/O address is 320, and is set to Interrupt 11 (IRQ 11).

Table 2–13
IOP 90 Jumper/Switch Settings

Switch	Setting
S1	0
S2	2
S3	3
W8	Jumpered

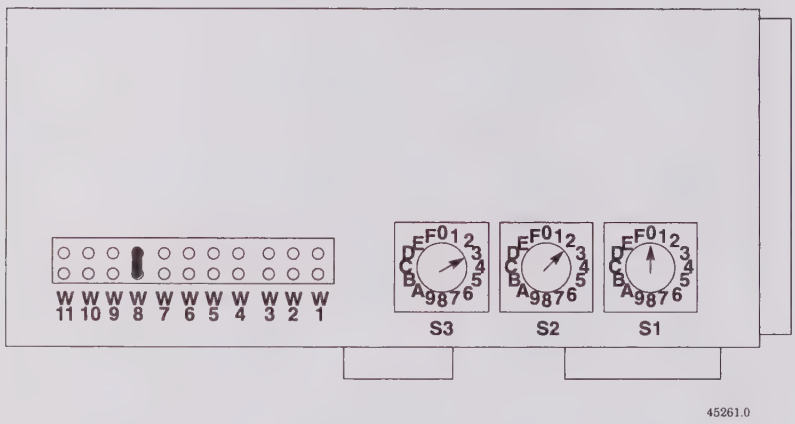


Figure 2–8 IOP 90 Jumper/Switch Locations

IOP Fixture ID Interface (GR AccelerATE System Only)

The IOP Fixture ID Interface board controls the fixture ID functions in a GR AccelerATE test system. It is supported only in the 13-slot PC. The I/O address is 324, with no interrupt necessary.

NOTE If your PC contains this IOP Fixture ID Interface board, the IOP90.ini file should include the following line:

```
IoPortCount = REG_DWORD 0x0008
```

Table 2–14
IOP Fixture ID Switch Settings

Switch	Setting
S1	4
S2	2
S3	3

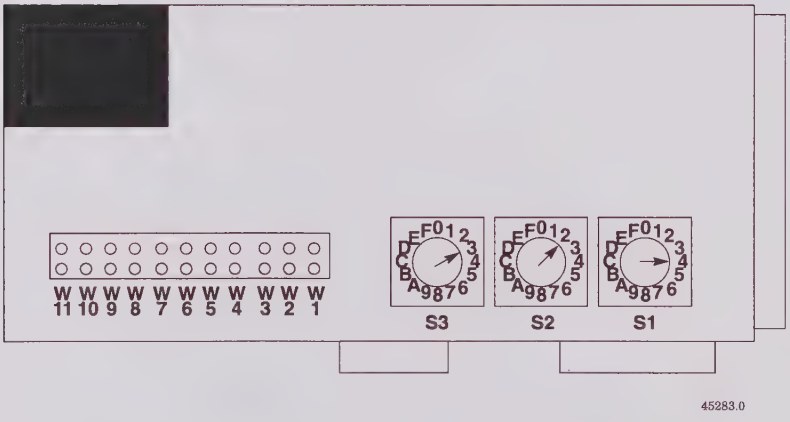


Figure 2–9 IOP Fixture ID Switch Locations

Network Card Setup

Network Card Setup for a PC with a 3c900 Ethernet Interface

For a 3COM 3c900 Ethernet interface, install the board in PCI Slot 3 for Pentium II, Slot 2 for Prioris PCs. The I/O address, memory address and IRQ will be assigned automatically. Typically, the selection is 5 for the interrupt and 9800 for the I/O address.

The network card includes a diagnostic utility called 3c90cfg.exe, which is located on the 3Com Installation Disk 1. This utility can be used from a DOS prompt to verify and save Network Interface Card settings for the 3c900.

Modem Jumper Settings

Table 2–15
Modem Jumper Settings as COM1

Jumper	Setting
J2	Pair 4 is Jumpered
J3	All Pin Pairs are Jumpered

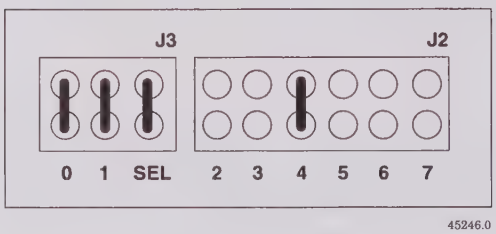


Figure 2–10 Modem Jumper Settings

Seagate 4GB Hard Disk Drive

The hard drive is installed as the last device on the SCSI cable. In this position, it provides termination to the SCSI bus.

Table 2–16
Seagate Hard Disk Drive J2

Pin Label	Condition
1–2	No Jumper
3–4	Jumper
5–6	No Jumper
7–8	No Jumper
9–10	No Jumper
11–12	No Jumper
13–14	No Jumper
15–16	Jumper

Table 2–17
Seagate Hard Disk Drive J6
(In removable Drive Bay)

Pin Label	Condition
1	Top pin to green wire Bottom pin to blank connector
2	Top pin to yellow wire Bottom pin to brown wire
4	Top pin to orange wire Bottom pin to red wire
Res	Not used
Res	Not used
	Top pin to red wire Bottom pin to brown wire

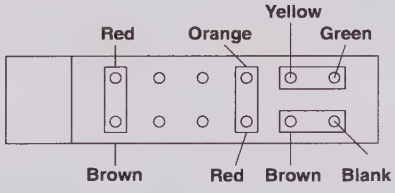


Figure 2–11 Pin Settings for Hard Disk Drive in removable Drive Bay

NOTE When the Hard Disk Drive is not positioned in a removable Drive Bay, no jumpers are required.

Configuration Information

This chapter relates to the PCs shipped by GenRad and includes the PC system configuration should you need to verify the system configuration. Setup information is described for DEC Prioris PCs and Pentium II PCs.

PC Setup Information for DEC Prioris LX Series PC

On the screen you will see Hard Drive = None. This is correct because the system uses SCSI disk drives (the screen only shows IDE drives).

The DEC Prioris LX Series (System Configuration Utility) EISA Setup should be booted and the system configured as follows:

```
System Prioris LX System Board

        Sys Proc Type                   Pentium (TM)
        Sys Proc Clock                  90MHz
        Sys Base Mem                    640K
        Sys Ext Mem                     23552KB
        Sys BIOS                        Phoenix BIOS(TM) Version 1.xx
                                        AT - Bus space disabled

Diskette Drive Group

        Onboard Diskette Controller     Enabled
        Diskette A                      3.5" 1.44MB
        Diskette B                      Not Installed
        Exchange Diskette Drives        Disabled
        Diskette Write Protection       Disabled
```

Hard Disk Group

Local Bus IDE Adapter	Disabled
Large Disk Access Mode	DOS

IDE - Primary Master Group

IDE-Primary Master Type	Not Installed
Multisector Transfers	Disabled
LBA Mode Control	Disabled
32-Bit I/O	Disabled
Transfers Mode	Standard

IDE - Primary Slave Group

IDE-Primary Slave Type	Not Installed
Multisector Transfers	Disabled
LBA Mode Control	Disabled
32-Bit I/O	Disabled
Transfers Mode	Standard

IDE - Secondary Master Group

IDE-Secondary Master Type	Not Installed
Multisector Transfers	Disabled
LBA Mode Control	Disabled
32-Bit I/O	Disabled
Transfers Mode	Standard

IDE - Secondary Slave Group

IDE-Secondary Slave Type	Not Installed
Multisector Transfers	Disabled
LBA Mode Control	Disabled
32-Bit I/O	Disabled
Transfers Mode	Standard

Boot Options Group

Boot Sequence	A then C

Serial Port Group

Serial Port 1	Enabled at 3F8-3FFh (IRQ 4)*
Serial Port 2	Enabled at 2F8-2FFh (IRQ 3)

* Disabled if internal modem is installed

Parallel Port Group

Parallel Port	Bi-Directional Mode

Video Options Group

Video Type	VGA or EGA

Shadow Options Group

Shadow Video BIOS ROM	Enabled
Shadow C8000h-CBFFFh	Disabled
Shadow D0000h-D7FFFh	Disabled
Shadow D8000h-DBFFFh	Disabled

Security Options Group

Supervisor Password	Not Installed
Password on Boot	Disabled
Diskette Access	User
Fixed Disk Boot Sector	Normal
Network server	Disabled
System Backup Reminder	Disabled
Virus Check Reminder	Disabled

```
Cache Options Group

        Internal Cache                  Enabled
        External Cache                  Enabled
        Cache System BIOS ROM:          Enabled
        Cache Video ROM:                Enabled

Reserved System Resources - Configuration File Overlay Version V1.0

        Mouse Port                      Enabled
        Hardware Monitor                Disabled
        PCI Arbiter Priority            System Default

Integrated SCSI Device Group

        Enable device                   Enabled
        PCI interrupt                   One IRQ Required (Press F6 to verify
                                        or change IRQ to 11.)
        Use default latency timer       No
        Latency timer value             40h

Integrated Network Device Group
        Enable device                   Enabled (Optional)
        PCI interrupt                   One IRQ Required (Press F6 to verify
                                        or change IRQ to 5.)
        Use default latency timer       No
        Latency timer value             40h

PCI Slot 1

        Enable device                   Disabled
        PCI interrupt                   None
        Use default latency timer       No
        Latency timer value             40h

PCI Slot 2

        Enable device                   Disabled
        PCI interrupt                   None
        Use default latency timer       No
        Latency timer value             40h

PCI Slot 3

        Enable device                   Disabled
        PCI interrupt                   None
        Use default latency timer       No
        Latency timer value             40h
```

CMOS Setup Parameters and Settings for DEC Prioris PCs

The system parameters for DEC Prioris PCs must be properly set to run in the GENEVA® environment.

➤ To change the CMOS parameter values:

1 Boot the PC

2 Press F2 to enter PC Setup or the BIOS Setup screen

3 Use right/left arrow keys to select menus

4 Use up/down arrow keys to select options

Use the following settings as a guideline for verifying or changing the parameter values.

CMOS Setup Parameters and Settings for DECpc 466LPx

```
System Time:                xx:xx:xx
System Date:                13 Jan 92  ROM BASE SETUP: ENABLED
Language:                   English

Diskette A:                 3.5in, 1.44MB
Diskette B:                 Not Installed

Hard Disk 1:                Type 36 (User Definable)
Hard Disk 2:                Not Installed
Hard Disk Values:           1:        2:
Cylinders:                  1017      0
Heads                       16        0
Precomensation:             0         0
Landing Zone:               1017      0
  Sectorsz:                 63        0
  Total Size (MB)           500       0

Base Memory:                640K
Extended Memory:            15360K
Video Card:                 VGA or EGA
Keyboard:                   Installed
Numlock at Boot:            On
Password:                   Not Installed

Parallel Port:              Enabled as LPT1: Bi-Directional Mode
Serial Port:                Enabled as COM1: 3F8H - 3FFH (IRQ4)
Serial Port:                Enabled as COM2: 2F8H - 2FFH (IRQ3)

Diskette Drive:             Enabled
IDE Hard Disk Drives:       Enabled
Boot from Diskette A:       Enabled
Boot from Hard Disk C:      Enabled
User Definable Drives:      Type 48 and 49
Exchange Diskette Drives:   Disabled

CPU Speed:                  FAST
Primary Cache:              Enabled
Secondary Cache:            Enabled
E00000H Selection:          Local Memory
Cache BIOS ROM:             Enabled
Shadow Video ROM:           Enabled
Shadow 32K at C8000H:       Disabled
Shadow 32K at D0000H:       Disabled
Shadow 32K at D8000H:       Disabled
```

CMOS Setup Parameters and Settings for DECpc 486/66LPx+

System Time:	xx:xx:xx	
System Date:	13 Jan 92	ROM BASE SETUP: ENABLED
Language:	English	
Diskette A:	3.5in, 1.44MB	
Diskette B:	Not Installed	
Hard Disk 1:	Type 48 (User Definable)	
Hard Disk 2:	Not Installed	
Hard Disk Values:	1:	2:
Cylinders:	1024	0
Heads	16	0
Precomensation:	0	0
Landing Zone:	1024	0
Sectorsz:	63	0
Total Size (MB)	504	0
Base Memory:	640K	
Extended Memory:	15360K	
Video Card:	VGA or EGA	
Keyboard:	Installed	
Numlock at Boot:	On	
Password:	Not Installed	
Parallel Port:	Enabled as LPT1: 378H - 37AH Bi-Directional Mode	
Serial Port:	Enabled as COM1: 3F8H - 3FFH (IRQ4)	
Serial Port:	Enabled as COM2: 2F8H - 2FFH (IRQ3)	
Diskette Drive:	Enabled	
Exchange Diskette Drives:	Disabled	
Diskette Write Protection:	Disabled	
IDE Hard Disk Drives:	Enabled	
Users Definable Drives:	48 and 49	
Large Drive Addressing:	Standard	
HDD Data Transfer Method:	Standard PIO	
Boot from Diskette A:	Enabled	
Boot from Hard Disk C:	Enabled	
CPU Speed:	FAST	
Primary Cache:	Enabled	
Secondary Cache:	Enabled	
AT Bus Space:	Disabled	
Cache BIOS ROM:	Enabled	
Shadow Video ROM:	Enabled	
Shadow 32K at C8000H:	Disabled	
Shadow 32K at D0000H:	Disabled	
Shadow 32K at D8000H:	Disabled	
Power Management:	Disabled	
Monitor Off Timer:	Disabled	
Monitor Suspend Timer:	Disabled	
Hard Disk Suspend Timer:	Disabled	
System Suspend Timer:	Disabled	

CMOS Setup Parameters and Settings for other DEC Prioris PCs

Main Page

Main Advanced Security Power Exit

System Time	XX:XX:XX
System Date:	13 Nov 95
Language:	English
Diskette A:	3.5in, 1.44MB
Diskette B:	Not Installed
IDE Primary Master:	(None)
IDE Primary Slave:	(None)
IDE Secondary Master:	(None)
IDE Secondary Slave:	(None)
Video System:	[EGA/VGA]
Memory and Cache:	
Boot Options:	
Keyboard Features:	
System Memory:	640K
Extended Memory:	23552K

IDE Adapter Primary/Secondary Master Slave Pages

Autotype Fixed Disk	Press [Enter] to detect and automatically fill in the IDE Drive Parameters
Type	None
Cylinders	
Heads	
Sectors/Track	
Write Precomp	
Multi-Sector Transfers	Disabled
LBA Control Mode	Disabled
32 Bit I/O	Disabled
Transfer Mode	Standard

Memory and Cache Options Page

Internal Cache:	Enabled
External Cache:	Enabled
System BIOS Cache:	Enabled
Video BIOS Shadow:	Enabled
Video BIOS Cache:	Enabled
Shadow 16K @ C8000h:	Disabled
Shadow 16K @ CC000h:	Disabled
Shadow 16K @ D0000h:	Disabled
Shadow 16K @ D4000h:	Disabled
Shadow 16K @ D8000h:	Disabled
Shadow 16K @ DC000h:	Disabled
AT Bus Space:	Disabled
Extended Memory Report:	Compatibility

Boot Options Page

Boot Sequence:	A then C
Setup Prompt:	Enabled
Post Error:	Enabled
Floppy Check:	Enabled
Summary Screen:	Enabled

Keyboard Features Page

NumLock	Auto
Key Click	Disabled
Keyboard auto-repeat rate	30/sec
Keyboard auto-repeat delay	1/2 sec

Advanced Options Page

Mouse Port	Enabled
LPT Port	378, IRQ 7
LPT Port Mode	Bi-directional
Serial Port 1	3F8, IRQ 4 (Disabled if Internal Modem)
Serial Port 2	2F8, IRQ 3
Diskette Controller	Enabled
Exchange Diskette Driver	Disabled
Diskette Write Protection	Disabled
Local Bus IDE adapter	Disabled

Advanced Chipset Control Page

Memory Parity Check	Enabled
CPU to PCI Posting	Enabled
CPU to Memory Posting	Enabled
PCI Arbiter Priority	System Default
PCI to Memory Posting	Enabled
PCI Burst Write	Enabled
EISA to PCI line buffer	Enabled
Large Disk access	DOS
Hardware monitor	Disabled

Security Options Page

Supervisor password is	Disabled
User password	Disabled
Set supervisor password	Press[Enter]
Set user password	Press[Enter]
Password on boot	Disabled
Diskette access	User
Fixed disk boot sector	Normal
Network server	Disabled
System backup reminder	Disabled
Virus check reminder	Disabled

Power Page

Power savings	Disabled
Monitor suspend timer	Disabled
Monitor off timer	Disabled

SCSI Setup Parameters and Settings

Use the following configuration information as guidelines for verifying or setting SCSI parameter values for DEC Prioris LX PCs.

NOTE Not used on Pentium II PC.

➤ To change or verify the SCSI controller settings:

1 Press Ctrl-A at the Adaptec SCSI prompt on bootup.

2 Select either of the following configuration option categories and press the Enter Key.

- Configure/View Host Adapter Settings
- SCSI Disk Utilities

When you select "Configure/View Host Adapter Settings" the following settings display:

SCSI Bus Interface Definitions

Host Adapter SCSI ID	#7
SCSI parity checking	Enabled
Host Adapter SCSI Termination	Enabled

When you select "SCSI Disk Utilities" the following option categories display:

Additional Options

SCSI Device Configuration	Press[Enter]
Advanced Configuration Options	Press[Enter]

3 Select one of the above option categories and press the Enter Key.

4 Select the "SCSI Device Configuration" option and ensure that only device 0 has the Send Start Unit Command selected (indicated by yes).

When you select "Advanced Configuration Options" the following settings display:

Advanced Configuration Options

Reset SCSI bus at IC Initialization	Enabled
Host Adapter BIOS	Enabled
Support removable disks under BIOS as fixed disks	Boot Only
Extended BIOS Translation	Enabled
BIOS Support for more than 2 drives (MS-DOS V5.0 and above)	Enabled

The following is an example view of the SCSI setup parameters and settings for the DEC Prioris LX PCs.

```
Control Allows Selections

        - Configure/View Host Adapter Settings
        - SCSI Disk Utilities

Configure/View Host Adapter Settings

    SCSI Bus Interface Definitions

        Host Adapter SCSI ID            #7
        SCSI parity checking            Enabled
        Host Adapter SCSI Termination   Enabled

    Additional Options

        SCSI Device Configuration       Press[Enter]
        Advanced Configuration Options  Press[Enter]

Advanced Options

        Reset SCSI bus @ IC Init        Enabled
        Host Address BIOS               Enabled
        Support BIOS                    Boot Only
        Extended BIOS Support           Enabled
        BIOS Support                    Enabled

SCSI Device Configuration

     Only device 0 should have Start On Power Up
```

EISA Setup Parameters and Settings

NOTE Not used on Pentium II PC.

To change or verify the EISA settings, boot the System Configuration Utility diskette, then choose Configure Computer from the Main Menu. Next, choose item 3, View or edit details, from the Configuration Menu, and wait for the configuration files to load. Use the following settings as a guideline for verifying or changing the parameter values. Choose item 5, Save and exit, from the Configuration Menu to save any changes and return to the Main Menu.

CMOS Setup Parameters and Settings

The following descriptions identify the setup pages for the Pentium II PC. If the user presses the DEL key during POST and enters the BIOS settings, they should be set as follows:

Standard CMOS Setup

Set Date and Time	
Primary Master	None
Primary Slave	None
Secondary Master	None
Secondary Slave	None
Drive A:	1.44M, 3.5 in.
Drive B:	None
Video:	EGA/VGA
Halt on:	All Errors

BIOS Features Setup

Virus Warning	Disabled
CPU Internal Cache	Enabled
External Cache	Enabled
Quick Power on Self Test	Disabled
Boot Sequence	A, C, SCSI
Swap Floppy Drive	Disabled
Boot Up Floppy Seek	Enabled
Boot Up NumLock Status	Off
Boot Up System Speed	High
Gate A20 Option	Fast
Typematic Rate Setting	Disabled
Typematic Rate (Chars/Sec)	30
Typematic RateDelay (msec)	250
Security Option	Setup
PCI/VGA Palette Snoop	Disabled
Assign IRQ for VGA	Disabled
Video BIOS Shadow	Enabled
C8000-CBFFF Shadow	Disabled
CC000-CFFFF Shadow	Disabled
D0000-D3FFF Shadow	Disabled
D4000-D7FFF Shadow	Disabled
D8000-DBFFF Shadow	Disabled
DC000-DFFFF Shadow	Disabled

Chipset Features Setup Page

Auto Configuration	Enabled
DRAM Speed Selection	70ns
DRAM RAS# Precharge time	4
MA Additional Wait State	Disabled
RAS# to CAS# Delay	Ensabled
DRAM Read Burst (B/E/F)	x2/3/4
DRAM Write Burst (B/E/F)	x3/3/3
ISA Bus Clock	PCICLK/4
DRAM Refresh Queue	Disabled
DRAM RAS Only Refresh	Enabled
DRAM ECC/Parity Select	Disabled
Fast DRAM Refresh	Disabled
Read-Around-Write	Disabled
PCI Burst Write Combine	Disabled
PCI-To-DRAM Pipeline	Disabled
CPU-To-PCI Write Post	Disabled
CPU-To-PCI IDE Posting	Disabled
System BIOS Cacheable	Disabled
Video RAM Cacheable	Disabled
8 bit I/O Recovery Time	3
16 bit I/O Recovery Time	2
Memory Hole at 15M-16M	Disabled
DRAM Fast Leadof	Disabled
Passive Release	Enabled
Delayed Transaction	Disabled

PNP/PCI Configuration

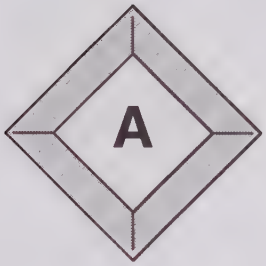
Resources Controlled by:	Manual
Reset Configuration Data:	Disabled
IRQ - 3 assigned to:	PCI/ISA Pnp
IRQ - 4 assigned to:	PCI/ISA PnP
IRQ - 5 assigned to:	PCI/ISA PnP
IRQ - 7 assigned to:	PCI/ISA PnP
IRQ - 9 assigned to:	Legacy ISA
IRQ - 10 assigned to:	Legacy ISA
IRQ - 11 assigned to:	PCI/ISA PnP or Legacy ISA for Handler
IRQ - 12 assigned to:	PCI/ISA PnP
IRG - 14 assigned to:	Legacy ISA or PCI/PnP for Handler
IRQ - 15 assigned to:	Legacy ISA
DMA - 0 assigned to:	PCI/ISA PnP
DMA - 3 assigned to:	PCI/ISA PnP
DMA - 5 assigned to:	PCI/ISA PnP
DMA - 6 assigned to:	PCI/ISA PnP
DMA - 7 assigned to:	PCI/ISA PnP
PCI IRQ Activated By:	Level
PCI IDE IRQ Map To:	PCI-Auto
Primary IDE INT#:	A
Secondary IDE INT#:	B
Used MEM Base Addr:	N/A

Integrated Peripherals

IDE Hdd Block Mode	Disabled
IDE Primary Master PIO	Auto
IDE Primary Slave PIO	Auto
IDE Secondary Master PIO	Auto
IDE Secondary Slave PIO	Auto
On-Chip Primary PCI IDE	Disabled
On-Chip Secondary PCI IDE	Disable
PCI Slot IDE 2nd Channel	Disable
Onboard FDD Controller	Enabled
Onboard UART 1	3F8/IRQ4*
Onboard UART 2	2F8/IRQ3
Onboard UART 2 mode	Standard
Onboard Parallel Port	378/IRQ7
Parallel Port Mode	EPP
Parallel Port EPP Type	EPP1.7
USB Controller	Disabled

Power Management should be disabled.
All other settings should be left at default.

Emergency Repair Disk



Under the Windows NT operating system, the Repair directory and the Emergency Repair Disk (ERD) contain copies of critical system configuration files and Registry information. During the Windows NT installation process you are prompted with the option to create an ERD. Whether you answer this question Yes or No, the Repair directory is created at this time. You need this information to reboot your PC after a system failure. You should answer yes when asked to create the initial Emergency Repair Disk. Some of the files included in the Repair directory are:

DEFAULT._	A compressed copy of the default registry hive for NT Workstation.
NTUSER.DA_	A compressed copy of the default user profile.
SAM._	A compressed copy of the Security Accounts Manager registry hive.
SECURITY._	A compressed copy of the Security registry hive.
SOFTWARE._	A compressed copy of the Software registry hive.
SYSTEM._	A compressed copy of the System registry hive.

After the GenRad software is installed, user accounts are setup, and your network connection is configured, you should update the ERD.

NOTE

It is recommended that you update your Emergency Repair Disk before and after you install software. Updating the ERD before installing software allows you to return your system to its pre–installation state should the software installation cause system problems. Updating the ERD after installing software includes the latest archive of these important system files.

Updating the Repair Directory and the Emergency Repair Disk

➤ To update the Repair Directory and the Emergency Repair Disk

1. Log on as **Administrator**, choose *Run...* from the **Start** menu.
2. Type C:WINNT\system32\rdisk.exe in the **Open** field. The Repair Disk Utility starts up.
3. Click on the **Update Repair Info** toggle box. This activates the **Repair Disk Utility Confirmation** Dialog Box.
4. Click the **Yes** button, which begins the update process.

   During the update process the files in the Repair directory are compared to actual registry files in order to find any changes made since the last repair update. If different files are found, the related files in the Repair directory are updated with the new system information. After the update of the Repair directory is complete, you then create your updated Emergency Repair Disk.
5. The Repair Disk Utility prompts you with a dialog box and the following question:

   ```
   Do you want to create the Emergency Repair Disk?
   ```

   Click the **Yes** button.
6. Follow the instructions on the dialog box. Label a floppy disk as your Emergency Repair Disk, and insert it into Drive A:.
7. Click the **OK** button. The utility formats the disk, then copies the contents of the Repair directory to this floppy.

NOTE If you do not update the Repair directory with current system configuration information before creating a new Emergency Repair Disk, the utility may report outdated information. Any software installation, hardware change, or password information not recorded in the Repair directory will be not be included on the new Emergency Repair Disk. This information would not be available in an emergency repair situation.

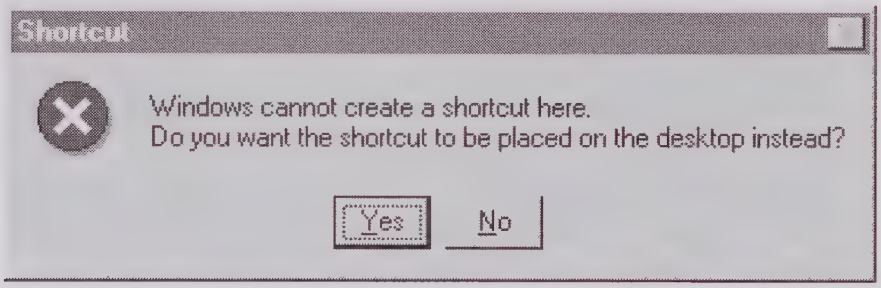
A good practice is to update the ERD as often as you create backups. Always update the ERD after you have installed software, added accounts, or configured hardware, etc.

➤ To create a shortcut to rdisk.exe

1 Log on as **Administrator**, choose *Find...Files or Folders...*, from the **Start** menu.

2 Type **rdisk.exe** in the Namect. field, and toggle Find Now.

3 Right-button click on the icon for rdisk.exe and a hidden menu pops up. Choose Create Shortcut from the hidden menu. It results in the following warning:



4 Click **Yes**. The shortcut is then be placed on your desktop.

To update your ERD from the shortcut, double click the shortcut icon to launch the Repair Disk Utility.

Using the Emergency Repair Disk

In the event of a system failure, the Emergency Repair Disk corrects system information that becomes scrambled or corrupt on the hard disk by restoring the necessary system files needed for a successful boot. The Emergency Repair Process begins by:

- Inspecting the Startup Environment
- Verifying the Windows NT System Files
- Inspecting the Boot Sector
- Inspecting the Registry Files

The Emergency Repair Disk allows you to try to repair your system before reloading software or reinstalling the entire system. In order to attempt a repair on the system you need the following items:

- The three Windows NT Setup Boot Disks
- An Up-to-date Emergency Repair Disk
- The NT Workstation CD

NOTE What you are trying to repair determines whether or not you need the CD. If you are repairing the boot sector, you do not need the CD.

➤ To repair a failed system

1. Insert the Setup Boot Disk 1 into the floppy drive and power on the computer.
2. Insert the Setup Boot Disk 2 when prompted. This part of the setup process inspects your system and determines what is needed to reload into a mini file system where it runs the repair process. When this setup process finishes, a Setup Welcome Page is displayed.
3. The Setup Welcome Page offers several options, including installing Windows NT and repairing system files. Press **R** to repair a damaged Windows NT installation.

   As part of the repair process, Setup performs each optional task shown below with an 'X' in its check box.

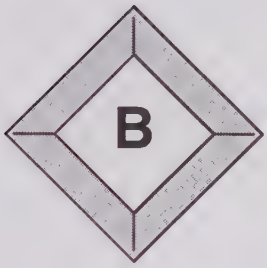
   - Inspect Registry files
   - Inspect Startup environment
   - Verify Windows NT system files
   - Inspect boot sector
   - Continue (perform selected tasks)

   If you want to select or deselect any item in the list, press the up or down arrow key to move the highlight to the item you want to change. Then press **ENTER**.
4. Select **Boot Sector** then arrow down to **Continue**. The system prompts you if you want to do a search of mass storage devices. Press **ENTER** to begin this search. If you skip this search, the system will not detect the CD-ROM drive and the repair will fail.
5. Insert Setup Boot Disk 3 at the system prompt. The search for mass storage devices begins now and should detect your CD-ROM drive at this time. Next you have the opportunity to specify additional mass storage devices. Depending on what you are repairing, you may or may not want to specify other devices at this time. When all searches are complete, Setup asks if you have the Emergency Repair Disk for your system.
6. Press **ENTER** if you have the Emergency Repair Disk.

   NOTE If you do not have the Emergency Repair Disk, press ESC. Setup attempts to locate Windows NT Version 4.0 for you. The system attempts to find the REPAIR directory on the system. When repairing the Boot Sector, however, continuing without a repair disk is not possible since without a boot sector, it would not be able to find the directory structure.
7. Insert the Emergency Repair Disk. If the CD is needed for the repair, the system prompts you for it. Insert the CD at that time. Press **ENTER** after the Emergency Repair Disk has been inserted.
8. At the conclusion of the repair, you are prompted to remove all disks and CDs and to restart the computer.

   You have now successfully repaired the Boot Sector. Again, this is only recommended with an up-to-date repair disk.

Field Replaceable Units



FRU Part Ordering Information

This appendix contains ordering information for PC Field Replaceable Units (FRUs). Refer to the Preface for further repair or exchange of FRUs information.

Equipment Return

Before returning a system module to GenRad for servicing, obtain a Returned Material Authorization (RMA) number from the GenRad Customer Care Desk. Including this number in all correspondence and on a tag attached to the returned item will ensure proper handling and identification.

For all systems not covered by warranty, you should forward a purchase order to avoid unnecessary delay. For return shipment, use packaging that is adequate to protect the module from static–sensitive and in–transit damage. Contact the GenRad Customer Care Desk for further information about returning equipment.

Table B–1
Field Replaceable Units for Pentium II PC

Part Number	Item
9021-0369–00	Power Supply for 7-Slot PC
9021-0368–00	Power Supply for 13-Slot PC
9021-0367–00	233 Mhz CPU board without memory
9021-0355-00	SCSI Card for 13-Slot PC
9021-0353-00	Chassis, Backplane, PS for 7-Slot PC
9021-0354-00	Chassis, Backplane, PS for 13-Slot PC
9021-0351-00	Removable Drive Bay
9021-0349-00	SCSI CD–ROM Drive 12x
9021-0348-00	4GB SCSI Tape Drive
9021-0347-00	Floppy Drive
9021-0336-00	Memory (64M) for Prioris PC only
9021-0345-00	Memory (64M)
9021-0013-01	AT–MXI Board
9021-0073-00	Comtrol HOSTESS Board
9022-0468-00	AT GPIB/TNT Board
9021-0281-01	3c900 PCI Ethernet Board
9021-0350-00	Blank 4G Tapes (TR–4)

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Reader Comments

Part Number _____

Title _____

To keep our manuals useful and accurate, we need your opinion. Please complete this page when appropriate, and return it to us. Your suggestions and comments will help improve this publication.

	Poor	Good	Excellent
Accuracy	☐	☐	☐
Organization	☐	☐	☐
Readability	☐	☐	☐
Design	☐	☐	☐
Illustration	☐	☐	☐

Did you find any specific errors? If so, please describe them along with their exact location.

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How have you used this manual?

- ☐ As a reference guide.
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♣ *The following information is optional, but helpful to us.*

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May we call you to discuss your comments?
If so, please include a phone number. _____

Thank you for your response.

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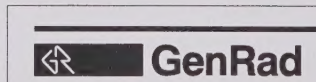

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